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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,314	06/07/2001	John J. Williamson	476-2027	8422

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William M. Lee, Jr.
Lee, Mann, Smith, McWilliams, Sweeney & Ohlson
P.O. Box 2786
Chicago, IL 60690-2786

EXAMINER

DINH, TUAN T

ART UNIT PAPER NUMBER

2827

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,314

Applicant(s)

WILLIAMSON ET AL.

Examiner

Tuan T Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 2 and 8 are objected to because of the following informalities:

Claims 2 and 8, line 3, change "travelling" to --traveling--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 7/29/02*
3. Claim ¹⁻¹³~~2~~ is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, it is unclear. The phrase of "the resistive material... such that in use it substantially absorbs..." is not understood. What does "it" refer to?

Regarding claim 13, it is unclear. What cause a printed circuit board, which is arranged to provide a line rate at least 1 giga bit per second?"

4. Claim 1 recites the limitation "the electrical conducting planes" in lines 8-9.

There is improper antecedent basis for this limitation in the claim.

5. Claim 3 recites the limitation "said electrical connection" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

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6. Claim 4 recites the limitation "said electrical connection" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 5 recites the limitation "said electrical connection" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 9 recites the limitation "the resistance" in lines 1-2. There is improper antecedent basis for this limitation in the claim.
9. Claim 10 recites the limitation "said electrical connection" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. (U. S. Patent 5,966,294).

As best understood to claim 1, Harada discloses a printed circuit board (PCB-1, column 9, line 57) and a method of manufacturing a PCB as shown in figures 10-30 comprising:

a plurality of layers (2, 3, 4, and 5, column 9, line 59) comprising electrically conducting (2-4) and electrically insulating planes (5);

at least one via (36a, 36b-figure 20, column 13, lines 38);

resistive material (6, column 10, line 6) provided on at least part of one or more faces of the printed circuit board which are substantially perpendicular to the layers (2-5) and wherein the resistive material is electrically connected to at least two of electrically conducting planes (3a, 3b, column 10, line 31).

As best understood to claims 2 and 8, Harada discloses the PCB as shown in figures 10-14 wherein the resistive material is arranged substantially absorbs spurious modes traveling along the at least two electrically conducting planes (column 12, lines 28-34).

As best understood to claim 3, Harada discloses the PCB as shown in figures 10-30 wherein the at least two electrically conducting layers are ground planes (2, column 10, line 8).

As best understood to claim 4, Harada discloses the PCB as shown in figures 10-30 wherein the at least two electrically conducting layers are power planes (3, column 10, line 9).

As best understood to claim 5, Harada discloses the PCB as shown in figures 10-30 wherein one of the at least two electrically conducting layers is a ground plane and the other is a power plane (2-3, column 10, lines 8-9).

As to claim 6, Harada discloses the PCB as shown in figures 20-30 wherein said via is selected from a through-hole via (36a, 36b).

As to claim 7, Harada discloses the PCB as shown in figures 10-30 wherein said resistive material is covered with a metallic shield (column 10, lines 34-37) such that in

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use, radiation from the printed circuit board is reduced and the effect of radiation outside the printed circuit board on the printed circuit board is reduced (column 12, lines 45-50).

As best understood to claim 9, Harada discloses the PCB as shown in figures 10-30 wherein the resistance of the resistive material is arranged to substantially match the impedance of the at least two electrically conducting planes.

As best understood to claims 10-12, Harada discloses the PCB as shown in figures 10-30 further comprising a electrical connection (7, column 3, lines 1-16) comprises a capacitive coupling between the resistive material (6) and at least one of the electrically conducting planes (see figures 19-20).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Selna and Kitazawa et al. discloses related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
July 29, 2002.


KAMAND CUNEO
PRIMARY EXAMINER